

# PATENT ABSTRACTS OF JAPAN

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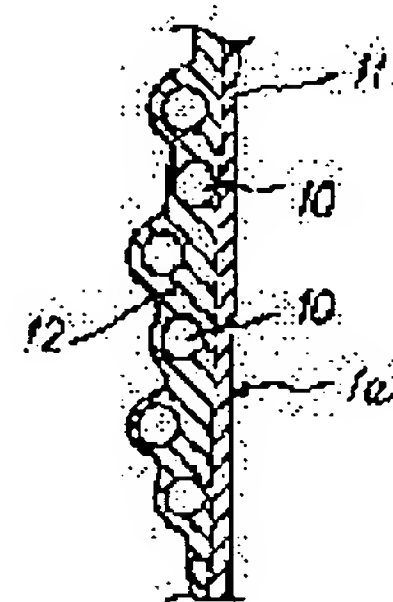
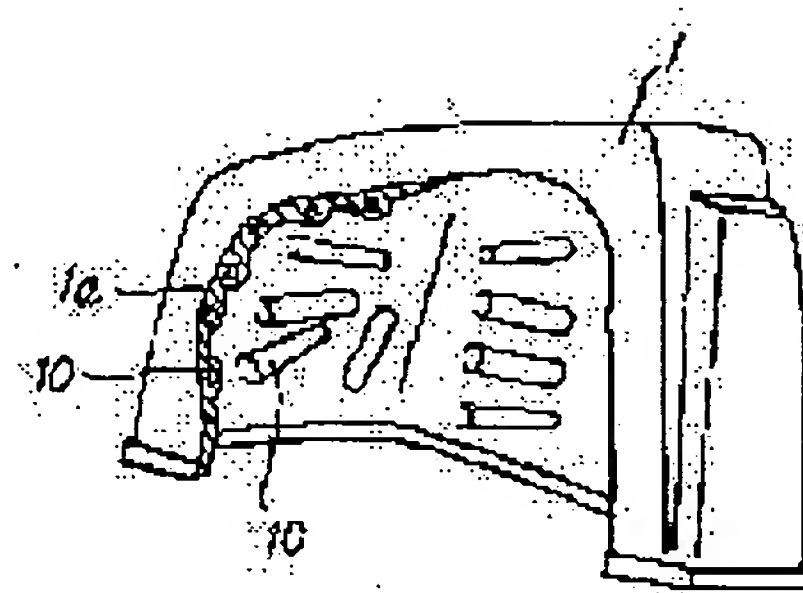
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## (54) COWLING FOR OUTBOARD MOTOR

### (57)Abstract:

PURPOSE: To prevent a sound insulating effect from being marred for a long period of time by embedding numerous cylinder members in a cowling wall body.

CONSTITUTION: Numerous cylinder bodies 10 are embedded in the wall body 1a of a cowling at its molded time. That is, a cowling body 11 of a certain thickness is formed of fiber reinforced plastic, and fiber reinforced plastics 12 are laminated on the inner surface side of the cowling body 11, in the inserted state of the cylinder bodies 10 made of material different from the fiber reinforced plastic of the cowling body 11. The cylinder bodies 10 are thus embedded in the cowling wall body 1a made of fiber reinforced plastic. When noise from an engine is generated in the cowling 1, this noise is reflected into the cowling 1 and prevented from being diffused outside the cowling 1.



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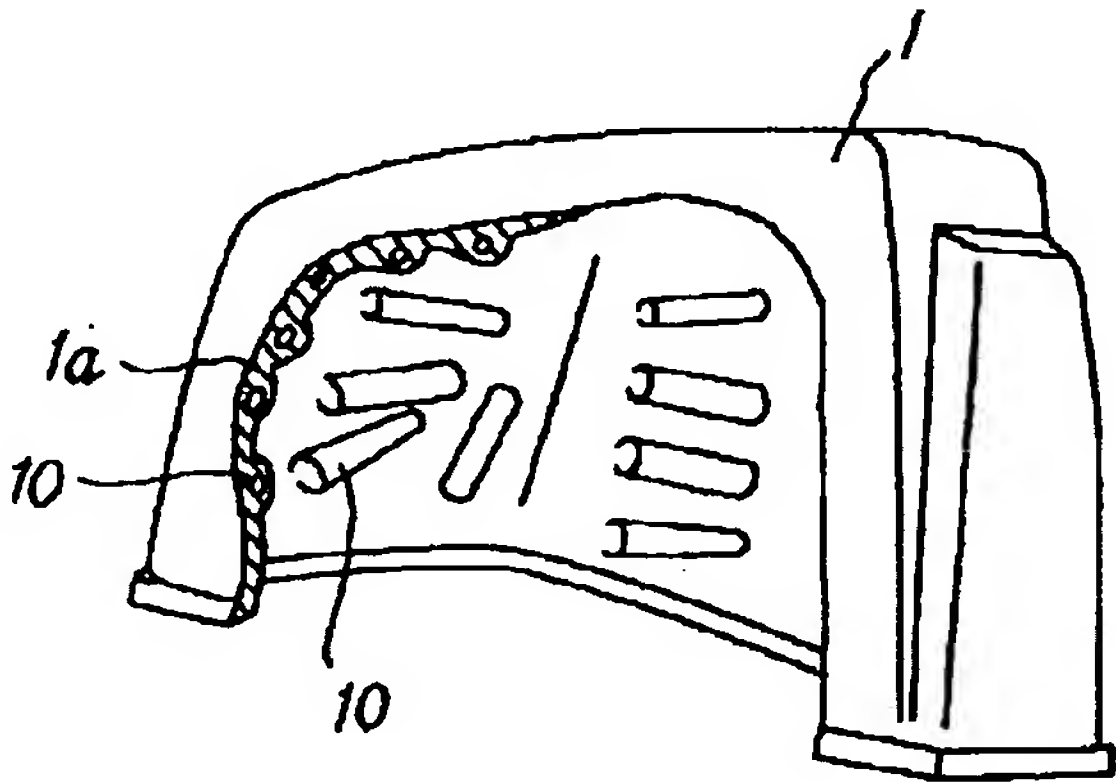
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(54)【発明の名称】 船外機のカウリング

(57)【要約】

【目的】 長年にわたって防音効果が損なわれるようなことがなく、しかも比較的容易に製作し得るカウリングを得ること。  
【構成】 カウリング壁体1 a内に多数の円筒部材1 0を埋設した。



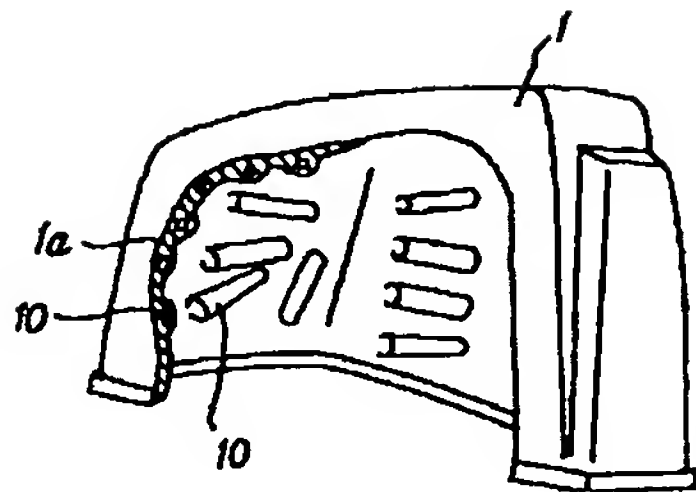
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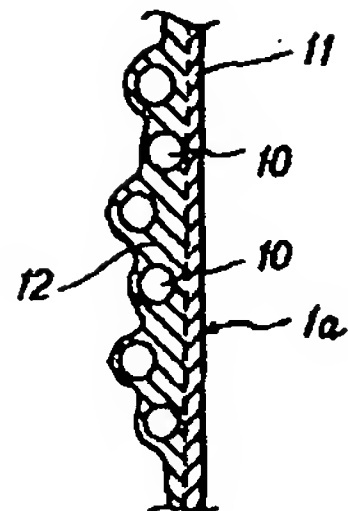
- 3 ギヤケース  
4 エンジン  
5 プロペラ

- 10 円筒体  
12 強化繊維プラスチック  
13 カウリング成形体

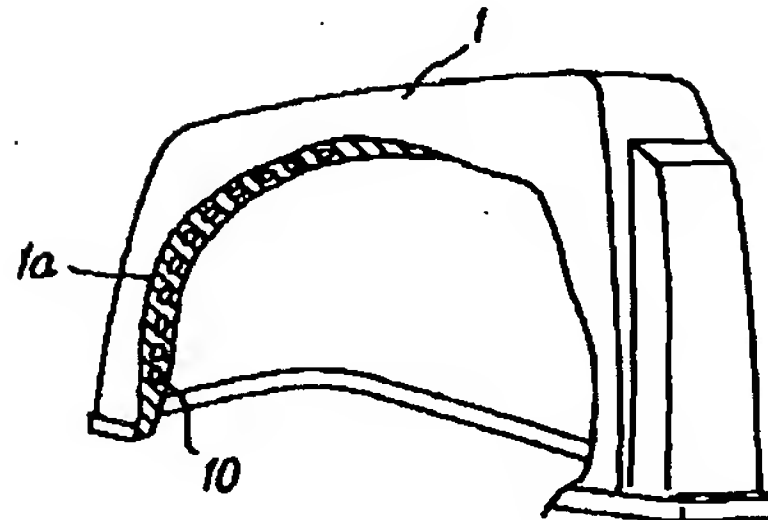
【図1】



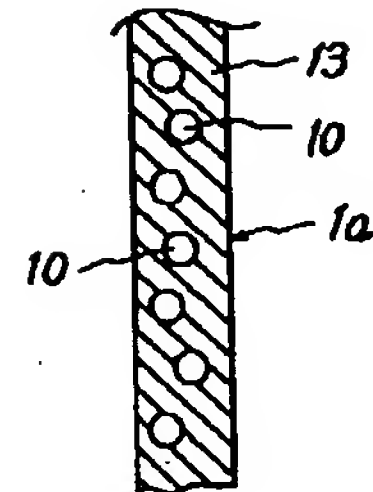
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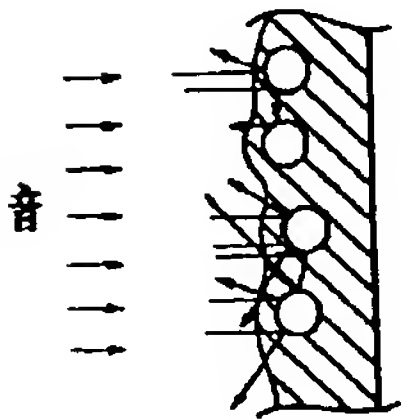
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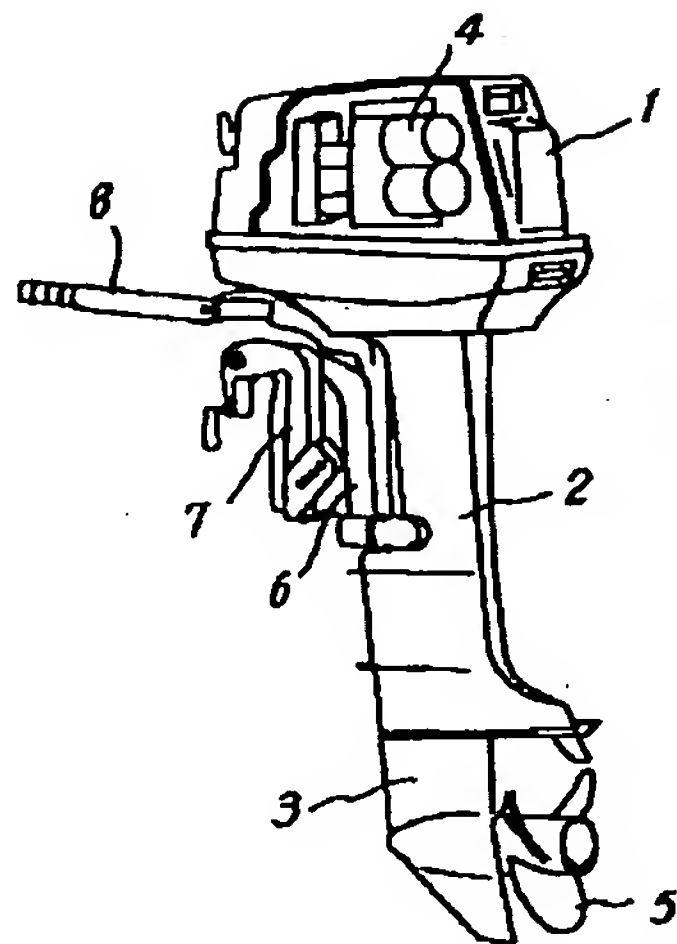
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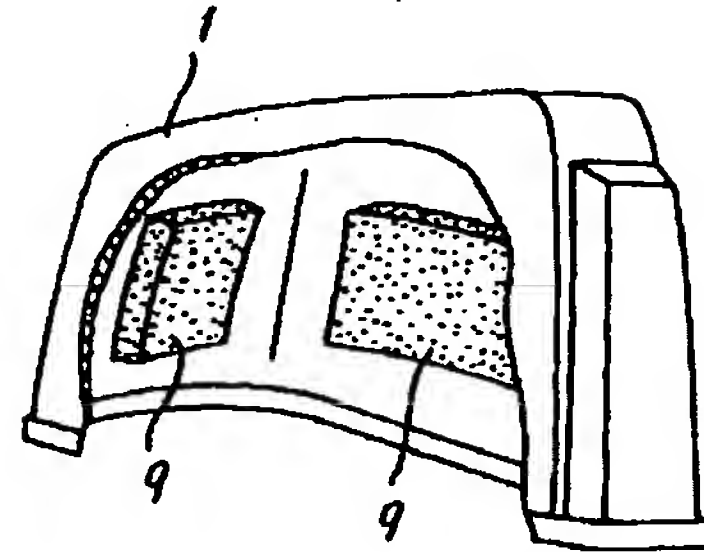
【図5】



【図6】



【図7】



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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to cowling which started cowling of an outboard motor, especially gave the noise control effectiveness.

[0002]

[Description of the Prior Art] Drawing 6 is drawing showing the gross shape of a common outboard motor, it has cowling 1, drive shaft housing 2, and a gear case 3, engine 4 grade is held in the above-mentioned cowling 1, the drive shaft connected with the output shaft of the engine 4 is \*\*\*\*(ed) in the above-mentioned drive shaft housing 2, interlocking connection of the outboard motor is carried out at the gearing by which the soffit of the drive shaft is prepared in the gear case 3, and revolution actuation has been made to be carried out in the propeller 5 through the gearing. And the above-mentioned outboard motor is made rockable at the vertical direction and the longitudinal direction by the handle 8 by which the above-mentioned drive shaft housing 2 is formed in the stern plate of a hull through the swivel bracket 6 and the clamp bracket 7 at the mounting eclipse and the outboard motor.

[0003] By the way, in order to prevent the noise generated with an engine in such an outboard motor, acoustic material 9 is stuck on the inner surface of the wrap cowling 1 for the above-mentioned engine section, or forming cowling between the steel plates of two sheets by what put acoustic material, as shown in drawing 7 is performed.

[0004]

[Problem(s) to be Solved by the Invention] However, in what stuck acoustic material on the cowling inner surface as mentioned above, there are problems, like it may hook, when acoustic material will

separate and fall or cowling will be opened and closed, if years pass, and the above-mentioned acoustic material may be exfoliated. moreover, in what put the absorption-of-sound machine, the configuration of the doubling section of top cowling and a ROAKAU ring is difficult, and the application is difficult for what makes cowling with consolidation fiber plastics on a fabrication -- etc. -- there is a problem.

[0005] This invention aims at obtaining cowling which can moreover be easily manufactured in comparison so that the noise control effectiveness may not be spoiled over many years in view of such a point.

[0006]

[Means for Solving the Problem] This invention is characterized by laying many body material underground in a cowling wall in order to attain the above-mentioned object.

[0007]

[Function] Scattered reflection of the noise generated with the engine is carried out by the cylinder material currently laid underground in the cowling wall, its rigidity of cowling improves by the above-mentioned cylinder material while it is prevented that the noise leaks and comes out of cowling, and it is also prevented that an oscillating sound occurs from cowling.

[0008]

[Example]. Hereafter, the example of this invention is explained with reference to drawing 1 thru/or drawing 5 .

[0009] Cowling of this invention is a fracture perspective view a part, and, as for drawing 1 , much cylinder objects 10 are laid underground in wall 1a of the cowling 1 at the time of the shaping. That is, as shown in drawing 2 , the cylinder material 10 is

laid underground in cowling wall 1a which consists of consolidation fiber plastics by forming the cowling object 11 of a certain thickness with consolidation fiber plastics, and carrying out the laminating of the consolidation fiber plastics 12 in the form which sandwiches the cylinder material 10 which consists of construction material which is different from the consolidation fiber plastics of the above-mentioned cowling object 11 in the inner surface side of the cowling object 11.

[0010] Drawing 3 is other examples of this invention, it is suitably mixed in the cowling shaping material 13 at the time of shaping of cowling 1, and the cylinder material 10 is fabricated in one, as shown in drawing 4 .

[0011] If a deer is carried out and the noise from an engine occurs in the above-mentioned cowling 1, the sound will be reflected in cowling, as shown in drawing 5 , and it will be prevented that stripping of the noise is carried out out of cowling 1. And when forming the above-mentioned cowling with

consolidation fiber plastics, by infixing the cylinder material 10 in the middle of the laminating, the laying under the ground can be performed and the shaping can also be performed comparatively easily.

[0012]

[Effect of the Invention] As explained above, since this invention laid cylinder material underground in the wall of cowling, scattered reflection of the noise is carried out into cowling, and a break through of the noise to the outside of cowling is prevented by the cylinder object. That engine performance seems and not to fall, even if years pass so that a noise control object comes off and may not fall since the cylinder object which performs this noise control operation is laid underground in the wall. Moreover, the effectiveness of the rigidity being increased with the cowling [ itself ] above-mentioned cylinder object, an oscillation of cowling also being prevented, and generating of the noise by oscillation of cowling also being prevented is done so.